

IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1. (Currently amended) An airway adapter configured to substantially simultaneously provide data indicative of respiratory gas flow and of a concentration of at least two substances present in respiration of an individual, comprising:
a housing with a bore formed therethrough;
a respiratory flow detection component formed in saidthe housing and in communication with saidthe bore;
a first respiratory detection component configured to facilitate sensing of at least a first of the at least two substances without diverting respiratory gases from saidthe housing; and
a second respiratory detection component comprising at least one luminescence quenching sensor configured to facilitate sensing of at least a second of the at least two substances without diverting respiratory gases from saidthe housing.

2. (Currently amended) The airway adapter of claim 1, wherein saidthe respiratory flow detection component comprises:
a structure within saidthe housing for creating therein a pressure differential in respiratory gas flow; and
first and second pressure bores formed in saidthe housing and located so as to facilitate detection of saidthe pressure differential.

3. (Currently amended) The airway adapter of claim 1, wherein saidthe first respiratory detection component comprises:
a detection chamber within saidthe housing, a boundary of saidthe detection chamber at least partially defined by at least one window.

4. (Currently amended) The airway adapter of claim 3, wherein saidthe boundary of saidthe detection chamber is at least partially defined by opposed windows.

5. (Currently amended) The airway adapter of claim 3, wherein saidthe at least one window is optically compatible so as to permit a beam of infrared radiation to traverse saidthe detection chamber.

6. (Currently amended) The airway adapter of claim 1, wherein saidthe first respiratory detection component is configured to facilitate measurement of at least one of CO₂, N₂O, and anesthetic agent.

7. (Canceled)

8. (Currently amended) The airway adapter of claim 1, wherein saidthe first respiratory detection component and saidthe second respiratory detection component include at least one common element.

9. (Currently amended) The airway adapter of claim 3, wherein saidthe second respiratory detection component is disposed on at least a portion of saidthe at least one window.

10. (Currently amended) The airway adapter of claim 3, wherein saidthe at least one window is formed from a polymer.

11. (Currently amended) The airway adapter of claim 10, wherein saidthe polymer comprises a biaxially oriented polypropylene.

12. (Currently amended) The airway adapter of claim 2, wherein saidthe structure for creating saidthe pressure differential comprises at least one strut.

13. (Currently amended) The airway adapter of claim 12, wherein saidthe first and second pressure bores are at least partially formed within saidthe at least one strut.

14. (Currently amended) The airway adapter of claim 13, wherein saidthe at least one strut comprises a restriction member with at least one surface oriented so as to substantially perpendicularly face a direction of respiratory gas flow through saidthe housing.

15. (Currently amended) The airway adapter of claim 14, wherein saidthe restriction member has a disk shape.

16. (Currently amended) The airway adapter of claim 14, wherein saidthe at least one strut includes a taper oriented toward saidthe detection chamber.

17. (Currently amended) The airway adapter of claim 13, wherein saidthe at least one strut is diametrically disposed and longitudinally extends within saidthe bore.

18. (Currently amended) The airway adapter of claim 17, wherein saidthe first and second pressure bores communicate respectively with laterally spaced first and second notches formed in saidthe at least one strut proximate a longitudinal axis of saidthe housing.

19. (Currently amended) The airway adapter of claim 18, wherein saidthe first and second notches are oriented substantially perpendicularly relative to a length of saidthe at least one strut.

20. (Currently amended) The airway adapter of claim 3, wherein saidthe respiratory flow detection component comprises first and second pressurization ports positioned on opposite sides of saidthe detection chamber.

21. (Currently amended) The airway adapter of claim 3, wherein saidthe respiratory flow detection component comprises first and second pressurization ports formed in saidthe housing on the same side of saidthe detection chamber.

22. (Original) An airway adapter, comprising:
a first detection component configured to use infrared radiation to facilitate detection of at least one substance in respiration of an individual; and
a second detection component configured to employ luminescence quenching techniques to facilitate detection of at least another substance in respiration of the individual.

23. (Original) The airway adapter of claim 22, further comprising a respiratory air flow detection component.

24. (Currently amended) The airway adapter of claim 22, wherein saidthe second detection component is configured to facilitate detection of at least respiratory oxygen.

25. (Currently amended) The airway adapter of claim 22, wherein saidthe first and second detection components have at least one element in common.

26. (Currently amended) The airway adapter of claim 22, wherein saidthe second detection component comprises a luminescable material.

27. (Currently amended) The airway adapter of claim 26, further comprising at least one window transparent to wavelengths of radiation capable of exciting saidthe luminescable material and emitted by saidthe luminescable material.

28. (Currently amended) The airway adapter of claim 22, wherein saidthe first detection component comprises a detection chamber configured to communicate with respiration of saidthe

individual, a boundary of saidthe detection chamber being at least partially defined by at least one window transparent to at least infrared radiation.

29. (Currently amended) The airway adapter of claim 28, wherein saidthe second detection component comprises a luminescable material.

30. (Currently amended) The airway adapter of claim 29, wherein saidthe luminescable material is at least partially disposed adjacent a surface of saidthe detection chamber.

Claims 31-41 (canceled)

42. (Currently amended) An airway adapter, comprising:
a housing including a bore formed at least partially therethrough;
a quantity of luminescable material in communication with saidthe bore; and
an infrared-transparent portion in communication with saidthe bore.

43. (Currently amended) The airway adapter of claim 42, further comprising a respiratory flow detection component in communication with saidthe bore.

44. (Currently amended) The airway adapter of claim 42, wherein saidthe luminescable material is at least partially located within a sampling chamber positioned adjacent saidthe infrared-transparent portion.

45. (Currently amended) The airway adapter of claim 42, wherein saidthe luminescable material is configured to facilitate detection of at least oxygen.

46. (Currently amended) The airway adapter of claim 42, wherein saidthe infrared-transparent portion is configured to facilitate detection of at least carbon dioxide.

47. (Currently amended) The airway adapter of claim 42, wherein ~~said~~the infrared-transparent portion is configured to facilitate detection of at least nitrous oxide.

48. (Currently amended) The airway adapter of claim 42, wherein ~~said~~the infrared-transparent portion is configured to facilitate detection of at least an anesthetic agent in respiration.

49. (Currently amended) The airway adapter of claim 42, wherein ~~said~~the infrared-transparent portion is also substantially transparent to at least one wavelength of radiation that will excite ~~said~~the luminescable material and to at least another wavelength of radiation that is emitted by ~~said~~the luminescable material and that is indicative of an amount of a substance present in respiration of an individual.

Claims 50-74 (Canceled)

75. (Currently amended) An airway adapter, comprising:
a housing with a flow passage extending therethrough;
a first window in ~~said~~the housing for facilitating luminescence quenching measurements of at least one substance within ~~said~~the flow passage;
a luminescable material disposed in communication with ~~said~~the flow passage and adjacent ~~said~~the first window; and
a pair of second windows positioned in ~~said~~the housing on opposite sides of ~~said~~the flow passage for facilitating infrared measurements of at least another substance within ~~said~~the flow passage.

76. (Currently amended) The airway adapter of claim 75, wherein a membrane carrying ~~said~~the luminescable material is disposed on an inside of ~~said~~the first window.

77. (Currently amended) The airway adapter of claim 75, wherein saidthe first window is positioned on a top of saidthe housing.

78. (Currently amended) The airway adapter of claim 77, wherein each second window of saidthe pair is positioned on a side of saidthe housing.

79. (Currently amended) The airway adapter of claim 75, wherein saidthe housing includes a seat for receiving a complementarily configured portion of a transducer.

80. (Currently amended) The airway adapter of claim 79, wherein saidthe seat is configured to orient a radiation source and luminescence detector toward saidthe first window, an infrared source toward one second window of saidthe pair, and an infrared detection component toward another second window of saidthe pair.

81. (Currently amended) The airway adapter of claim 75, further comprising a respiratory flow detection component located along another position of saidthe flow passage than positions of saidthe first window and saidthe pair of second windows.

82. (Currently amended) An airway adapter, comprising:
a housing including a flow passage extending through at least a portion of a length thereof;
a first window in saidthe housing for facilitating luminescence quenching measurements of at least one substance in saidthe flow passage;
a luminescable material disposed in communication with saidthe flow passage and adjacent saidthe first window; and
a second window in saidthe housing for facilitating infrared measurements of at least another substance in saidthe flow passage.

83. (Currently amended) The airway adapter of claim 82, wherein a membrane carrying saidthe luminescable material is disposed on an inside of saidthe first window.

84. (Currently amended) The airway adapter of claim 82, wherein saidthe first window is positioned on a top of saidthe housing.

85. (Currently amended) The airway adapter of claim 82, wherein saidthe second window is positioned on a side of saidthe housing.

86. (Currently amended) The airway adapter of claim 82, wherein saidthe housing includes a seat for receiving a complementarily configured portion of a transducer.

87. (Currently amended) The airway adapter of claim 86, wherein saidthe seat is configured to orient a radiation source and luminescence detector toward saidthe first window and an infrared source and infrared detection component toward saidthe second window.

88. (Currently amended) The airway adapter of claim 82, further comprising a respiratory flow detection component located along another position of saidthe flow passage than positions of saidthe first window and saidthe pair of second windows.

Claims 89-97 (Canceled)